

Appendix 1

Population Figures Used in Report 1989-1996 Average Population Figures for Utah Health Departments

Agegroup	Years	Bear River	Central Utah	Davis County	Salt Lake County	South-Eastern	South-West
0 - 4	1988-1990	11,765	4,980	20,470	72,035	5,020	7,850
	1991-1993	11,906	4,723	20,026	73,666	4,700	8,389
	1994-1996	12,462	4,882	19,553	76,674	4,504	10,041
5 -14	1988-1990	23,549	12,384	43,666	144,200	11,344	17,382
	1991-1993	24,413	12,442	45,341	149,390	11,061	18,380
	1994-1996	24,292	11,801	44,485	148,140	10,439	19,377
15 - 24	1988-1990	20,110	7,580	30,273	112,847	7,160	13,265
	1991-1993	21,898	8,998	33,657	120,583	7,997	15,890
	1994-1996	24,613	11,132	38,513	132,489	9,672	19,459
25 - 34	1988-1990	16,807	6,101	29,520	125,950	7,125	9,928
	1991-1993	16,965	6,253	31,199	126,458	6,471	11,426
	1994-1996	17,778	6,986	32,633	125,447	6,496	15,579
35 - 44	1988-1990	11,965	6,085	24,005	100,985	6,623	8,983
	1991-1993	13,636	6,947	27,821	114,741	7,203	10,731
	1994-1996	15,385	7,893	31,704	124,487	7,679	13,597
45 - 54	1988-1990	7,785	4,167	15,659	59,811	4,192	6,183
	1991-1993	8,259	4,519	17,499	68,024	4,513	7,117
	1994-1996	9,430	5,488	20,809	81,457	5,365	9,240
55 - 64	1988-1990	6,246	3,861	11,271	44,429	3,667	6,455
	1991-1993	6,516	3,746	12,390	45,577	3,615	6,695
	1994-1996	6,908	3,780	13,591	48,490	3,673	7,281
65 - 74	1988-1990	5,068	3,830	7,256	35,414	3,027	6,919
	1991-1993	5,129	3,849	8,286	37,508	3,177	7,904
	1994-1996	5,284	3,861	9,344	38,866	3,285	8,701
75 - 84	1988-1990	3,276	2,514	3,038	19,114	1,640	3,685
	1991-1993	3,500	2,738	3,529	20,836	1,789	4,559
	1994-1996	3,663	2,895	4,211	22,817	1,965	5,820
85+	1988-1990	1,015	601	844	5,550	448	902
	1991-1993	1,094	639	919	6,219	491	1,063
	1994-1996	1,167	745	1,033	6,752	560	1,384
Total	1988-1990	107,587	52,102	186,002	720,335	50,247	81,552
	1991-1993	113,317	54,853	200,667	763,000	51,017	92,153
	1994-1996	120,982	59,464	215,875	805,619	53,639	110,481
Total Female	1988-1990	53,724	26,208	92,373	363,193	25,405	41,258
	1991-1993	56,405	27,608	99,680	383,872	25,832	46,580
	1994-1996	60,232	29,910	107,046	404,673	27,125	55,768
Girls Aged 15-17	1988-1990	2,645	1,537	5,202	17,311	1,469	2,147
	1991-1993	3,002	1,786	6,009	19,396	1,634	2,435
	1994-1996	3,631	2,003	6,996	22,420	1,796	2,962
Average # of Births	1988-1990	2,437	920	3,910	14,737	936	1,583
	1991-1993	2,447	924	3,835	15,077	889	1,715
	1994-1996	2,602	983	4,143	15,912	850	2,174

Appendix 1 continued

Population Figures Used in Report

1989-1996 Average Population Figures for Utah Health Departments (continued)

Agegroup	Years	Summit County	Tooele County	Tri- County	Utah County	Wasatch County	Weber/ Morgan
0 - 4	1988-1990	1,378	2,443	3,940	28,999	1,015	15,355
	1991-1993	1,535	2,389	3,551	31,953	960	15,889
	1994-1996	1,767	2,504	3,320	36,432	1,005	17,025
5 - 14	1988-1990	2,979	5,653	8,886	55,060	2,162	31,929
	1991-1993	3,454	5,560	8,907	56,935	2,445	32,327
	1994-1996	3,802	5,358	8,352	57,675	2,404	31,742
15 - 24	1988-1990	1,948	4,106	4,977	63,846	1,494	25,875
	1991-1993	2,499	4,555	5,618	69,531	1,715	28,441
	1994-1996	3,253	5,261	6,831	77,118	2,140	31,930
25 - 34	1988-1990	2,873	3,946	5,263	39,071	1,571	25,304
	1991-1993	3,346	3,880	5,021	41,869	1,465	25,288
	1994-1996	3,873	4,139	4,764	47,105	1,605	26,047
35 - 44	1988-1990	2,786	3,530	4,571	25,682	1,341	20,775
	1991-1993	3,619	3,840	5,225	29,427	1,597	22,974
	1994-1996	4,413	4,221	5,907	33,530	1,911	24,531
45 - 54	1988-1990	1,378	2,643	3,072	16,223	846	14,174
	1991-1993	1,840	2,921	3,247	18,121	1,013	15,395
	1994-1996	2,631	3,311	3,737	21,649	1,250	17,768
55 - 64	1988-1990	828	2,020	2,363	12,913	651	12,390
	1991-1993	1,022	2,070	2,491	13,464	695	12,337
	1994-1996	1,246	2,211	2,663	14,054	776	12,482
65 - 74	1988-1990	518	1,424	1,713	10,369	510	10,504
	1991-1993	629	1,568	1,832	11,074	570	11,071
	1994-1996	815	1,716	1,947	11,642	608	11,221
75 - 84	1988-1990	293	636	893	5,950	281	5,501
	1991-1993	338	729	970	6,512	345	6,023
	1994-1996	436	848	1,058	7,089	393	6,720
85+	1988-1990	53	164	210	1,557	78	1,644
	1991-1993	84	188	240	1,780	96	1,805
	1994-1996	119	224	294	1,992	102	1,953
Total	1988-1990	15,034	26,564	35,887	259,669	9,950	163,452
	1991-1993	18,367	27,700	37,101	280,666	10,900	171,550
	1994-1996	22,354	29,793	38,874	308,286	12,193	181,420
Total Female	1988-1990	7,349	13,120	17,952	131,430	4,989	82,932
	1991-1993	8,986	13,716	18,595	141,884	5,440	86,771
	1994-1996	10,959	14,770	19,516	155,539	6,079	91,572
Girls Aged 15-17	1988-1990	355	766	1,090	6,940	258	4,135
	1991-1993	429	855	1,238	7,909	329	4,509
	1994-1996	554	899	1,388	8,777	398	4,964
Average # of Births	1988-1990	249	465	707	6,636	183	3,188
	1991-1993	297	486	700	6,970	184	3,240
	1994-1996	356	550	661	7,962	223	3,545

Definitions of Demographic, Risk Factor, and Health Related Behavior Information

Demographic Information	Definition
Race, ethnicity ¹	Percentages based on Modified Age, Race and Sex (MARS) file from the 1990 Census of the Population
Education ²	Highest grade in school completed; percentages are for those aged 18 years and older
Income ²	Combined household income; expressed as percentage of households
Risk Factors and Health Related Behaviors ²	Definition
Current Smoking	Ever smoked 100 cigarettes, and a current smoker; percent of those aged 18 years and older
Current Alcohol Use	Had at least 12 drinks containing alcohol in entire lifetime, and had at least one drink of beer, wine, or liquor during the past month; percentage of those aged 18 years and older
Hypertension	High blood pressure ever diagnosed by a medical doctor (all ages)
Diabetes	Diabetes ever diagnosed by a medical doctor (all ages)
Exercise	Exercise vigorously for at least 10 minutes at least 3 times per week; percentage of those aged 18 years and older
Ideal body weight	Ideal body weight from 1959 Metropolitan Desirable Weight Table; percentage of those aged 18 years and older
Cholesterol testing	Ever had blood cholesterol checked; percentage of those age 18 years and older
Asthma	Currently under medical care for asthma (all ages, and aged 0-17)
Households with guns	Anyone in the household own any guns; expressed as a percentage of households
Household with loaded guns	Any of the guns currently loaded; expressed as percentage of households
No health insurance	Individual not covered by ANY insurance, including Medicaid, Medicare, Indian Health Service (all ages)
Outpatient visit in past 12 months	Received outpatient services in the past 12 months (all ages)
Women who have ever had mammography	"How long has it been since you/she had a mammogram"; re-coded into percentage of women over age 40 who have ever had mammogram

1 MARS data made available by the Governor's Office of Planning and Budget

2 Education, income, risk factor, and health related behavior data from "Utah's 1996 Health Status Survey"

Appendix 3

Health Status Indicators by Race and Hispanic Origin: United States, 1995

Health Status Indicators	Race					
	Total ¹	White	Black	American Indian/ Alaska Native	Asian/ Pacific Islander	Hispanic Origin ²
1 Race/ethnicity-specific infant mortality as measured by the rate (per 1,000 live births) of deaths among infants under one year of age.	7.6	6.3	15.1	11.3 ⁸	5.8 ³	7.1 ^{3,4}
2 Total Deaths per 100,000 population (ICD-9 nos. 0-E999) ⁵	503.9	476.9	765.7	468.5	298.9	381.5
3 Motor vehicle crash deaths per 100,000 population (ICD-9 nos. E810-E825) ⁵	18.3	16.4	16.6	33.1	10.8	16.3
4 Work-related injury deaths per 100,000 population ⁶	3.0	2.9	2.8	1.7	2.2	3.2
5 Suicides per 100,000 population (ICD-9 nos. E950-E959) ⁵	11.2	11.9	6.9	12.2	6.6	7.0
6 Homicides per 100,000 population (ICD-9 nos. E960-E978) ⁵	9.4	5.5	33.4	11.9	5.4	14.7
7 Lung cancer deaths per 100,000 population (ICD-9 no. 162) ⁵	38.3	38.0	47.3	22.7	18.0	14.5
8 Female breast cancer deaths per 100,000 women (ICD-9 no. 174) ⁵	21.0	20.5	27.5	10.4	11.0	12.7
9 Cardiovascular disease deaths per 100,000 population (ICD-9 nos. 390-448) ⁵	174.9	167.2	259.4	132.9	110.5	117.1
Heart disease deaths per 100,000 population (ICD-9 nos. 390-398, 402, 404-429) ⁵	138.3	133.1	198.8	104.5	78.9	90.7
Stroke deaths per 100,000 population (ICD-9 nos. 430-438) ⁵	26.7	24.7	45.0	21.6	25.8	20.0
10 Reported incidence (per 100,000 population) of acquired immunodeficiency syndrome ^{7,8}	25.7	13.9 ⁸	90.5 ⁸	12.3	5.8	42.3
11 Reported incidence (per 100,000 population) of measles ⁹	0.1	---	---	---	---	---
12 Reported incidence (per 100,000 population) of tuberculosis ⁹	8.7	4.9	23.5	14.5	43.0	17.8
13 Reported incidence (per 100,000 population) of primary and secondary syphilis ⁹	6.3	0.8 ⁸	46.2 ⁹	3.0	0.6	2.1
14 Prevalence of low birth weight as measured by the percentage of live born infants weighing under 2,500 grams at birth	7.3	6.2	13.2	6.5	6.8	6.3
15 Births to adolescents (ages 10-17 years) as a percentage of total live births	5.3	4.3	10.8	8.7	2.2	7.6

Appendix 3 continued

Health Status Indicators by Race and Hispanic Origin: United States, 1995 (continued)

Health Status Indicators	Race					
	Total ¹	White	Black	American Indian/ Alaska Native	Asian/ Pacific Islander	Hispanic Origin ²
16 Prenatal care as measured by the percentage of mothers delivering live infants who did not receive care during the first trimester of pregnancy	18.7	16.4	29.6	33.3	20.1	29.2
17 Childhood poverty as measured by the proportion of children under 15 years of age living in families at or below the poverty level						
Under 18 years	20.8	16.2	41.9	---	---	40.0
Under 15 years	21.5	16.8	43.3	---	---	40.6
5-17 years ¹⁰	19.0	---	---	---	---	---
18 Proportion of persons living in counties exceeding U.S. Environmental Protection Agency standards for air quality during the previous year ¹¹	32.9	30.9	42.0	22.5	55.0	57.2

--- Data not available.

1 Includes racial and ethnic groups not shown separately.

2 Hispanic origin can be of any race.

3 1991 data: data are obtained from the Linked File.

4 Data are for 49 States and the District of Columbia.

5 Age adjusted to the 1940 standard population.

6 Data are for people 16 years and over.

7 By date of diagnosis. Adjusted for delays in reporting; not adjusted for underreporting.

8 Data are for the non-Hispanic population.

9 By date of report

10 Related children in families

11 Data based on 1990 county population estimates.

Interpreting Rates Based on Small Numbers

For many of the health districts in Utah, the measures for these health status indicators are based on very small numbers of events. We decided to report the rates even for very small numbers, because we believed that the information would be useful. It is important to remember that rates based on small numbers of events are unstable. In common language, that means that they will vary from year to year (or from three year period to three year period, in this case) even if nothing else changes. Therefore, it is important not to overreact to a rate that is higher or lower than expected.

How much are they likely to vary? Put another way, how much higher or lower than expected must a rate be before we can be sure that it really is high or low? Epidemiologists often use confidence interval to help answer that question. For these data, a confidence interval can be thought of as indicating the amount that the rate can be expected to vary from year-to-year. For example, the 95% confidence interval for a rate of 200 per 100,000 persons based on 10 deaths over five years (in a population of 1,000 persons) would be from 96 to 368 per 100,000. If the Utah rate for that cause was within the confidence interval (96-368), then the rate would not be significantly different. On the other hand, if the Utah rate was outside the confidence interval, the rate would be significantly different. For example, if the Utah rate were 180 per 100,000, the district rate of 200 per 100,000 would not be considered significantly different; if the Utah rate were 80 per 100,000, the district rate of 200 per 100,000 would be considered significantly different. However, deciding that the rates are not significantly different does not mean that the observed difference is not important. It means that we cannot be sure that chance alone did not cause the difference. It does not tell us that the difference was caused by chance.

If you want to use a confidence interval to help interpret a rate for your district, Table 1 gives the 95% confidence intervals for selected numbers of deaths. To convert the confidence interval for the number of deaths into a confidence interval around the rate use the following formula:

$$\frac{\text{number in confidence interval}}{\text{actual number of deaths}} \times \text{actual rate}$$

For example, with 10 deaths and a rate of 200 (per 100,000 persons), the confidence interval for deaths is from 4.8 to 18.4 (from Table 1) so the confidence interval for the rate is:

$$\frac{4.8}{10} \times 200 = 96$$

$$\frac{18.4}{10} \times 200 = 368$$

Please call us if you have questions.

Appendix 4 continued

Table 1. 95% Confidence Intervals

Number of Deaths	Lower	Upper
0	0	3.7
1	0	5.6
2	0.2	7.2
3	0.6	8.8
4	1.1	10.2
5	1.6	11.7
6	2.2	13.1
7	2.8	14.4
8	3.5	15.8
9	4.1	17.1
10	4.8	18.4
11	5.5	19.7
12	6.2	21
13	6.9	22.2
14	7.7	23.5
15	8.4	24.7
20	12.2	30.9
25	15.2	34.8
30	19.3	40.7
40	27.6	52.4
50	36.1	63.9
100	80.4	119.6

The Healthy People 1000 Health Status Indicators for Utah were prepared by the Bureau of Surveillance and Analysis, Office of Public Health Data, using data provided by:

Department of Health:

Bureau of Vital Records and Health Statistics
Division of Community and Family Health Services
Bureau of Chronic Disease Prevention and Control
Bureau of Epidemiology
Bureau of Environmental Services
Bureau of Health Promotion
Bureau of HIV/AIDS, Tuberculosis, and Refugee Health
Office of Ethnic and Elderly Studies

Department of Environmental Quality

Governor's Office of Planning and Budget

The U.S. rates for whites were obtained from the National Center for Health Statistics (301-436-3548).

The U.S. rates for adolescent births were obtained from reference 4 (below).

The information on income, education, risk factors, and health related behaviors was obtained from "Utah's 1996 Health Status Survey"

Office of Public Health Data
Utah Department of Health
P. O. Box 142801
Salt Lake City, Utah 84114-2101
801-538-6108

The Governor's Office of Planning and Budget provided population estimates.

Governor's Office of Planning and Budget
116 State Capitol
Salt Lake City, Utah 84114
801-538-1036

References:

1. Freedman MA: Health status indicators for the year 2000. Statistical Notes: Vol 1 no 1. Hyattsville, Maryland: National Center for Health Statistics, 1991.
2. U.S. Department of Health and Human Services. Healthy People 2000: National health promotion and disease prevention objectives for the nation. Washington: Public Health Service, 1991.

Appendix 5 continued

3. Klein RJ, Hawk SA: Health Status Indicators: Definitions and national data. Statistical Notes: Vol 1 no 3. Hyattsville, Maryland: National Center for Health Statistics, 1992.
4. National Center for Health Statistics. Health United States, 1991. Hyattsville, MD. Public Health Service. 1992.

For additional information, contact the following:

About health in Bear River District:

Bear River District Health Dept.
655 East 1300 North
Logan, Utah 84341
Telephone: 752-3730

About health in Summit County:

Summit County Public Health Dept.
88 North 50 East, POB 128
Coalville, Utah 84017
Telephone: 336-4451, extension 222

About health in Central Utah:

Central Utah Public Health Dept.
70 Westview Drive
Richfield, Utah 84701
Telephone: 896-5451 or 896-5452

About health in Tooele County:

Tooele County Health Dept.
151 North Main Street
Tooele, Utah 84074
Telephone: 843-2300

About health in Davis County:

Davis County Health Department
Courthouse Annex
50 East State Street, POB 618
Farmington, Utah 84025-0618
Telephone: 451-3340

About health in Tri-County district:

Tri-County Health Department
147 East Main Street
Vernal, Utah 84078
Telephone: 781-5475

About health in Salt Lake County:

Salt Lake City/County Health Dept.
2001 South State Street, S-2500
Salt Lake City, Utah 84190-2150
Telephone: 468-2700

About health in Utah County:

Utah County Health Dept.
589 South State Street
Provo, Utah 84606
Telephone: 370-8700

About health in Southeastern Utah:

Southeastern Utah District Health Dept.
28 South 1st East, POB 800
Price, Utah 84501
Telephone: 637-3671

About health in Wasatch County:

Wasatch City/County Health Dept.
805 West 100 South, POB 246
Heber City, Utah 84032
Telephone: 654-2700

About health in Southwest Utah

Southwest Utah Public Health Dept.
285 West Tabernacle
St. George, Utah 84770
Phone: 673-3528

About health in Weber/Morgan district:

Weber/Morgan District Health Dept.
2570 Grant Avenue
Ogden, Utah 84401
Telephone: 399-8433

Appendix 5 continued

About mortality data and rates:

Bureau of Surveillance and Analysis
Office of Public Health Data
Utah Department of Health
(801) 538-6108

Bureau of Vital Records
Office of Public Health Data
Utah Department of Health
(801) 538-6186

Div. Community & Family Health Services
Utah Department of Health
(801) 538-6901

About infant mortality and reproductive health:

Div. Community & Family Health Services
Utah Department of Health
(801) 538-6901

About injuries and violence:

Injury Prevention Program
Div. Community & Family Health Services
Utah Department of Health
(801) 538-9402

Health Education Program
Div. Community & Family Health Services
Utah Department of Health
(801) 538-6262

About measles and other infectious diseases:

Bureau of Epidemiology
Div. Epidemiology and Laboratory Services
Utah Department of Health
(801) 538-6191

About tuberculosis:

Bureau of HIV/AIDS, Tuberculosis, and
Refugee Health
Div. of Epidemiology and Laboratory Services
(801) 538-6096

About heart disease and stroke:

Cardiovascular Program
Bur. Chronic Disease Prevention & Control
Div. Community & Family Health Services
(801) 538-6141

About HIV infection and AIDS:

Bureau of HIV/AIDS, Tuberculosis, and
Refugee Health
Div. Epidemiology and Laboratory Services
Utah Department of Health
(801) 538-6096

About cancer:

Cancer Screening and Control Program
Bur. Chronic Disease Prevention & Control
Div. Community & Family Health Services
Utah Department of Health
(801) 538-6141

About air quality:

Division of Air Quality
Department of Environmental Quality
(801) 536-4000